

*Where there's a bill, there's a way...*

# Introducing the *Michigan Saves* Program for Energy Efficiency and Renewable Energy

Michigan Saves Workgroup  
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# Michigan Saves Effort Is Being Modeled On Pay As You Save<sup>®</sup>

- “Invented” in 1999, by Energy Efficiency Institute (EEI)
- First presented in commissioned paper to National Association of Utility Regulatory Commissioners (NARUC)
- Piloted in three states so far (NH, HI, KA). Similar program effort for PV in Berkeley, CA (through property tax bill)
- Active consideration in MI, NY, WI, & VT
- See [www.paysamerica.org](http://www.paysamerica.org)

# What is Pay As You Save?

**A market-based system  
with built-in, no-cost incentives  
for customers, vendors,  
and capital providers  
to act in their own interests  
while producing unprecedented  
resource efficiency investment  
in society's interest**

# What is Pay As You Save? (2)

Customers can receive utility bill reducing measures or packages of measures, with no money down and monthly payments less than savings, and the obligation to pay only as long as the savings continue to accrue to them

# How PAYS Works...

- Vendor markets products and services
- Customer selects (qualifying) measure(s)
- Measure(s) installed at no cost to Customer
- Customer pays tariffed charge on utility bill:
  - Measures certified to provide savings right away
  - Estimated savings greater than payments
  - DNP, just like any other utility tariff
- Permanent measures
  - When customer leaves, charges run “with the meter”
- Portable measures (option)
  - When customer leaves, they can take and pay balance

# Why PAYS?

- Lowest utility/ratepayer costs per installed measure (& per savings) of any known program type
- Can allow all customers to participate
- Has no practical limit on annual program activity
- Promotes comprehensiveness: can include savings of any “utility bill”

# PAYS Can Replace Today's Riskier Offers

- Things are tough now; why should I worsen my cash flow?
- Do I have better uses for my capital?
- Do I have better uses for my debt capacity?
- What if I leave my premises before I get to recoup my savings?
- What if products fail before I get savings?
- What if savings do not materialize?
- Why pay to upgrade landlord's building?



# PAYS Promises

## An Offer “Too Good To Refuse”

- No upfront payment
- Immediate net savings by customer paying charges
- No credit checks, liens, or hassles
- No new debt obligation (off-the-books investment)
- Payments stop upon vacating (or sale)
- Pay only if measures continue to function
- Independently certified measures & savings
- Tenants can pay for measures only while they save



# Essential elements of PAYS®

- Tariff (payments) assigned to meter location, not customer per se
- Billing and payment on utility bill, with disconnection for non-payment
- Independent certification that products/measures are appropriate for customer and generally accepted savings estimates exceed payments

PAYS enables investment in efficiency and renewables, just like utilities have always bought supply-side resources, but for a “rate class” of one... the customer who benefits

- Tariff (payments) assigned to meter location, not customer per se
- Billing and payment on utility bill, with disconnection for non-payment
- Independent “certification” that products/measures will be generally appropriate and result in cost savings for the customer

# Eligible Measures

- Cost effective based on retail rates
- Typical PAYS<sup>®</sup> test: Each measure or package of measures is calculated to cost less than  $\frac{3}{4}$  of estimated annual savings over  $\frac{3}{4}$  of the life of the measure (the “ $\frac{3}{4} \times \frac{3}{4}$  rule”)...
- All measures warranted to continue functioning until their cost is fully paid back through calculated savings

# Retrofits for Entire Buildings & Whole Systems

- If a package of measures meets the PAYS<sup>®</sup> test, the package is treated as a PAYS product, even if some measures would not qualify by themselves
- For packages that don't qualify, a qualifying portion can be a PAYS product, and the customer can purchase the rest using any other financial instruments...
- Or, other incentive payments can cause the whole package to qualify

PAYS may appear to be the same as On-the-Bill Financing, Shared-Savings, or Performance Contracting, BUT...

- Charges assigned to meter, not customer
- All cost and savings analysis is done up-front, using current, known rates and standardized, independently approved, “investment grade” calculations
- No need to track variations from “baseline” weather, facility usage, utility rates, etc.
- Independent “ombudsman” function

<b>Criteria</b>	<b>OBF</b>	<b>PAYS®</b>
No initial customer cost	✓	✓
No credit check or liens		✓
Customer assumes debt	✓	
Assurance charges are less than savings		✓
Payments end if measure fails and is not repaired or customer leaves		✓
Program is fuel blind		✓
Independent quality control	✓	✓
Serves tenants and developers		✓
Requires ratepayer or public funds	✓	Not for C&I
Disconnection for non-payment		✓
Free riders (if rebates are offered)	✓	Moot
Start-up time	< 6 months	< 6 months



# PAYS may appear to be like Other Utility EE&RE Programs, but... (1)

- Market based: C&I participants can cover 100% of program costs, and program size can be limited only by the market
- Utility ratepayers & taxpayers do not have to provide the capital: vendors or investors will



## PAYS may appear to be like Other Utility EE&RE Programs, but... (2)

- Small start-up funding opens potential for unlimited pool of low-cost capital
- Works for landlords and tenants; Even works for low-income
- Fuel blind: Possible multi-bill savings
- It appears no new Michigan legislation is needed to begin in C&I markets

# Costs to Set Up & Operate PAYS

- *One-time: system set up*
  - design and approval of tariff and contracts
  - set up third-party certification
  - find capital provider(s)
  - billing system adjustments
- *Ongoing: operating and financing costs*
  - financing paid for by participants in monthly charges
  - some operating costs in charge (100% in larger units)
  - estimated residential transaction cost of \$75-100

# Lowest Utility/Ratepayer Cost

- Those who get savings pay all costs for the most cost-effective measures plus all operational costs
- Rebates can be limited to the amount needed to qualify a target measure for 3/4x3/4 rule (i.e., incentive \$ go further)
- Most marketing and typical program costs are carried by vendors, who profit from more sales

# Market Barriers to Investments in Efficiency and Renewables (1)

- Requires capital or debt capacity
- “Saving energy is not my business, \_\_\_\_\_ing is my business”
- Benefits are often deferred:  
Pay more now to pay less later
- High information costs

# Market Barriers to Investments in Efficiency and Renewables (2)

- Trust & Quality Assurance: “What if I don’t get the savings they promise?”
- Transience: “What if I move away before I get my savings?”
- Landlord/Tenant Split Incentives: “Why should I pay to improve someone else’s building?”

# PAYS Products

- Any and all money-saving resource efficiency products (fuel blind)
- Purchased with no up-front payment and no customer debt obligation
- The customer pays a utility tariff that is always less than estimated savings
- Payable only if and when the PAYS measures are working

# More Desirable Products

- No upfront payment
- No credit check, liens or hassles
- No new debt obligation
- Pay only while saving (and pay less)
- Independent certification  
with quality control / quality assurance
- Tenants can buy while they rent



# PAYS is a System

- Like mortgage, lease, credit card – makes products easier to buy
- PAYS increases purchase of many cost effective measures
- PAYS can be used to finance the *qualifying portion* of any green energy investment (whatever meets 3/4 x 3/4 rule!)

# PAYS Customer Role & Responsibilities

- Offers vendor(s) the opportunity to go prospecting in their facility
- Selects measure or package of measures for installation
- Signs simple contract or agreement form without complicated approvals
- Obligated to pay only while they personally benefit from savings
- Agrees to pay lower annual total bill(s)

# PAYS Vendor Role & Responsibilities

- Markets program and markets to any eligible customer products likely to pass the PAYS 3/4x3/4 screening test
- Initially qualifies products
  - Verified by independent Certification Agent
- Responsible for quality
  - Must post a bond to participate, and then warranty packages of measures for duration of PAYS payments
- May provide capital

# PAYS Certification Agent Roles & Responsibilities

- Assures measures meet 3/4x3/4 rule and are appropriate for installation
- Monitors performance using a combination of follow-up phone calls and random site visits
  - Note: Vendors pay costs of failed inspections
- Ongoing customer assurance, QA/QC
- Accounting & Reporting

# PAYS Utility Role & Responsibilities

- Puts charges on bill and collects payments
- Pays the capital provider
- Notifies new customers at PAYS locations of remaining obligation
  - previous owner or landlord notifies the new owner or tenant, too
- Guarantees bad debt

# PAYS Public Service Commission

## Roles and Responsibilities

- Approves a utility tariff/rate that:
  - Defines measure and customer eligibility
  - Specifies rules & responsibilities of customers, vendors, utility, certification agent, and capital provider
  - Addresses utility start-up costs and handling of bad-debt

# Costs to implement PAYS (1)

- One-time start-up  
(estimate <\$1 million):
  - System design; tariff & contract forms and approvals
  - Set-up 3<sup>rd</sup> Party Certification
  - Select capital provider(s)
- One time utility billing systems adjustments (estimate ~\$250k each for Michigan's biggest utilities)



# Costs to implement PAYS® (2)

- On-going operations and financing costs can be built into PAYS customer charges (estimated <1-2% “overhead”)
- Start-up costs COULD be spread over all participants, but only if continuation of the program is assured and no other constraints are put on the market
- Compare to 50% rebate programs with >10% “overhead”

# Disconnect for Non-Payment

- If a measure works, disconnection is the same as for any other tariffed charge
- If a measure fails during its warranty, customer stops paying, unless and until it's fixed
  - Vendors can be bounced from the program if they fail to rectify problems
- If a measure fails after warranty, Certification Agent can have it repaired, with term extended to recover repair costs

# Permanent/Portable Measures

- Portable measures can be easily removed by occupant (e.g., CFLs)
- Permanent measures become a part of the structure (HVAC, lighting fixtures, insulation, etc.)
- Some measures defy easy classification and require policy determination

# First PAYS<sup>®</sup> Demonstration

- New Hampshire; NHPUC Orders in 2001, 2004
- PSNH for municipal customers
- NHEC for all members
- \$4.3 million invested; bad debt < \$100
- Independent evaluation concludes successful program

# New Hampshire Products

- PSNH: lighting, street lighting, exit sign retrofits and window replacement; new boilers
- NHEC: CFLs, weatherization of gas heated homes, lighting retrofits, and HVAC retrofits (all classes)

# Kansas Pilot with PAYS Elements

- Commission approval December 20, 2007
- Not PAYS®: landlords at risk for measure failure; 90% of savings used for program costs
- Residential landlords paying about 50% of measure cost
- Results: 47 buildings completed; 89 in pipeline; demand overwhelmed contractors, 98 rejected offer (some implemented projects on own)
- Electric and gas savings only; no portable measures

# Hawaii PAYS® Pilot

- PAYS® legislation -- 2006
- Solar hot water (SHW) heating pilot
- Commission approved 3 utilities to offer PAYS® tariff on June 29, 2007
- \$1,000 rebates and very high electric rates make SHW cost effective
- 2 of 3 utilities meeting targets; 20% participants had previously rejected offers
- Proposal to expand to more than 10 times SWH



# PAYS Benefit/Cost Ratio

- Except for PAYS setup
  - C&I participants pay all costs through monthly PAYS charges
  - Residential participants can pay all but about \$75-100 per house, which helps cover the initial analysis work
- PSNH spent \$113,383 dollars to set up PAYS system, which now has installed \$3.6 million of measures
- PAYS screening and customer payment schedule assures cost effectiveness
  - Easily passes both the standardized utility resource cost test and participant test

# For more information...

- PAYS America, Inc.,  
501c3 since 2004;  
[www.paysamerica.org](http://www.paysamerica.org)
- Energy Efficiency Institute,  
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